

Dialogic® PowerMedia™ Extended Media Server

Datasheet

Powerful Software Media Server for Real-Time Multimedia Communications

Dialogic® PowerMedia™ Extended Media Server (PowerMedia XMS) is a powerful software media server that enables standards-based, real-time multimedia communications solutions for mobile and broadband environments.

PowerMedia XMS can help reduce development and operational costs by offering standards-based media control interfaces and management capabilities that can be deployed in the cloud or in traditional environments, such as the IP Multimedia Subsystem (IMS).

PowerMedia XMS is built on robust, feature-rich, and award-winning host media processing technology that has been developed by Dialogic and deployed by customers worldwide for more than a decade.



Features

Advanced multimedia processing functionality, including HD voice and video

Multimedia processing and SIP call control via the HTTP RESTful control interface

Validated on the Amazon EC2 cloud [planned]

MSML support

User-friendly OA&M that includes a web-based GUI and HTTP RESTful interface for real-time control and monitoring

Simple yet flexible licensing model that allows scaling from ten ports to thousands of ports per server by software upgrade

Benefits

Allows solution providers to attract new users and increase target revenue by offering multimedia solutions with a high user Quality of Experience (QoE)

Simplifies development for programmers who do not have an in-depth familiarity with traditional telecommunications interfaces

Can save OPEX by deploying communications solutions in the cloud

Enables the delivery of solutions in IMS and other SIP-based environments

Helps reduce deployment costs and OPEX by enabling the quick resolution of operational issues

Can save CAPEX by allowing solutions to be scaled easily as demand grows

Overview

PowerMedia XMS offers a rich variety of advanced media processing functions, including audio and video play/record and content streaming, and can be used to build a wide variety of real-time multimedia processing solutions. These solutions can range from traditional voice messaging and conferencing to innovative video conferencing and social interaction applications, such as delivering internet content into a video conference in real time using the RTSP protocol.

Figure 1 illustrates the wide variety of PowerMedia XMS interfaces and functions, and the real-time multimedia communications solutions it can enable in different deployment environments.

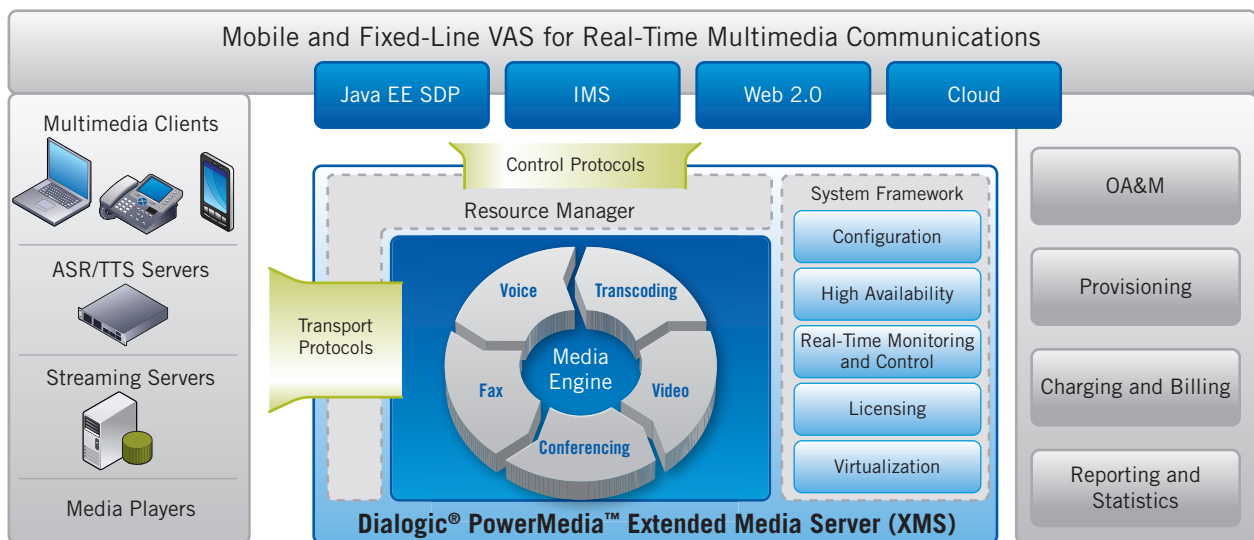


Figure 1. Dialogic® PowerMedia™ Extended Media Server: Interfaces, Functions, and Solutions

Deployment Environments

PowerMedia XMS can be deployed on premise or in the cloud, allowing enterprise and service provider customers to benefit from cloud deployment. The control interfaces offered with XMS provide developers with the following choices of deployment environments:

- **Traditional SIP** — A SIP Application Server (AS) controls XMS using the MSML control interface (RFC 5707) to enable deployment as an IMS Media Resource Function (MRF)
- **Innovative Web 2.0 and Cloud** — A web application written in an appropriate language (Python, JavaScript, etc.) can control XMS using an HTTP RESTful interface. Developers can use SIP call processing functionality built into XMS or a third-party call control model where SIP signaling is handled by an AS.

Operations, Administration, and Maintenance

PowerMedia XMS provides powerful and user-friendly OA&M functionality, and can generally be installed and configured for initial use in 30 minutes or less. In order to reduce operational costs when deploying solutions, XMS can be managed remotely through a web-based operator console and an HTTP RESTful interface. XMS also supports remote real-time monitoring, alarms, logging, and tracing.

Licensing

The simple, flexible, and scalable licensing model of PowerMedia XMS lets customers pay only for the functionality they need when they need it. XMS-based solutions can be scaled from ten to thousands of ports by simple software upgrade.

Solution Example

Figure 2 illustrates an example of a video conferencing solution that can be built with PowerMedia XMS for business or social interaction. Users can call into the video conferencing solution from a variety of endpoints, including smartphones, tablets, SIP desktop phones, and softphones, as well as browser-based clients using Flash-to-SIP media gateways available from third-parties.

A solution built with PowerMedia XMS can also be used to record video conferences or stream internet-based multimedia content into a conference from an external RTSP streaming server.

Dialogic offers a demonstration version of this type of solution, which is available for download at www.dialogic.com/vcdemo.

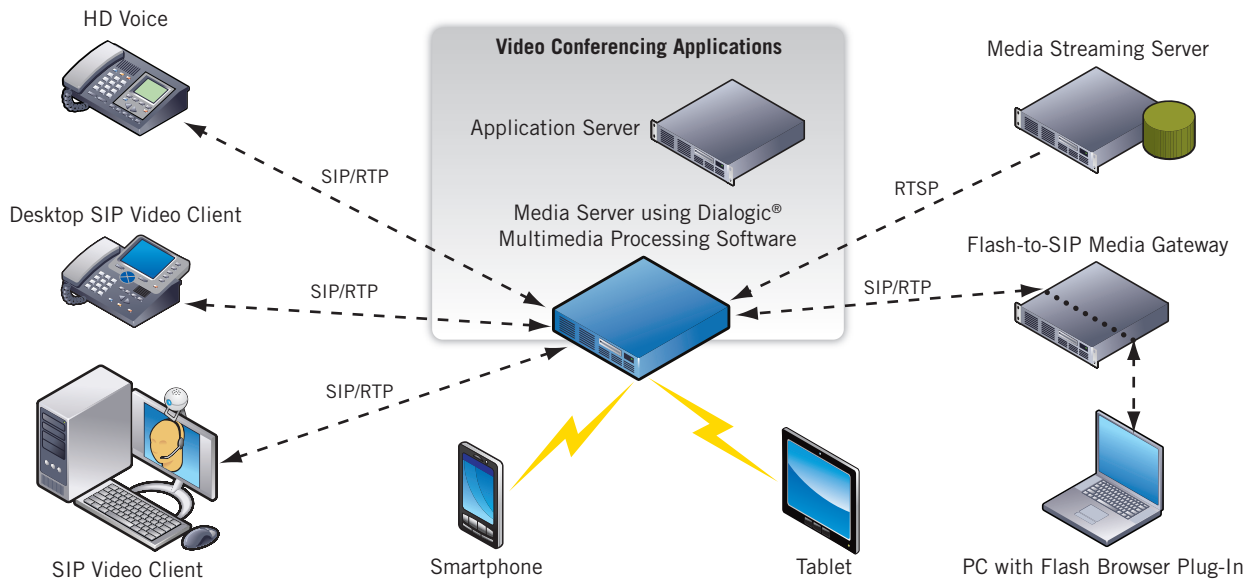


Figure 2. Video Conferencing Solution

Technical Specifications

Media and Coders

Audio

Voice play/record, tone generation/detection (DTMF, RFC2833), and call progress analysis

Positive Voice Detection (PVD) and Positive Answering Machine Detection (PAMD) for outbound calling scenarios

Audio conferencing with active talker detection, DTMF clamping; coach-pupil mode and per party gain/volume control

Audio Codecs

G.711u/a, G.723, G.729a, G.729b, AMR-NB, AMR-WB, G.722

Video

Play/record

Video transcoding, transrating, and transizing

Video overlays

Video conferencing with 1, 4, 6, 9 image tiling, custom layouts, attendee captions via dynamic overlays, static image or video clip display, and conference recording

Video Codecs

H.263, H.263+, H.263++ Baseline Profile

MPEG 4, H.264 Baseline Profile

Image size: VGA, CIF, QCIF

Frame rate: Up to 30 FPS

Bit rate: Up to 768 kbps

Video Fast Update (VFU): Configurable dynamic responses to I-Frame Update requests from clients

File container: WAV

File operations: HTTP and/or NFS, RTSP/RTP

Signaling, Media, and Control Interfaces

IPv4

RTP, RTCP

HTTP-based RESTful web services interface for controlling media processing and SIP signaling operations

MSML (RFC 5707) for media control

RTSP client support for streaming multimedia content from RTSP servers

Technical Specifications *(continued)*

Capacity

Typical media sessions per server:

- **Audio** — Up to 2000 sessions of G.711 or 1000 sessions with transcoding
- **Video transcoding** — Up to 450 unidirectional sessions per system (also includes audio transcoding), depending on system capacity, codec, resolution, and frame rate

System Management

Web GUI

Real-time monitoring and management via HTTP RESTful control interface

Remotely managed tracing and logging

Hardware Support and Minimum System Requirements

Hardware: Intel Architecture-based server

Operating System: CentOS Release 6, provided as part of installation

Processor: Intel Dual 545x or greater

Ethernet: Dual 1000Base-TX (RJ-45)

Memory: 4 GB RAM minimum

Storage: 60 GB HD minimum

Obtaining Third-Party Licenses

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www.dialogic.com

Dialogic Inc.
1504 McCarthy Boulevard
Milpitas, CA 95035-7405
USA

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